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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,452	01/30/2002	David D. Bohn	10971959-5	3468

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

LUU, THANH X

ART UNIT PAPER NUMBER

2878

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,452

Applicant(s)

BOHN, DAVID D

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-18 and 23 is/are pending in the application.
- 4a) Of the above claim(s) 10-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-9 and 23 in Paper No. 6 is acknowledged.
2. Claims 10-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "160", "162" and "164" of Figure 6, mentioned on page 34 of the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4-7 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin (U.S. Patent 3,617,759).

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Regarding claims 1, 2, 4-7 and 23, Martin discloses (see Figures 1-3) a position sensing device, comprising: a substrate (18); a first portion (20) and a second portion (platform in which 10 is mounted) wherein the first portion is attached to the substrate and wherein the second portion is movably mounted to the first portion along a first axis (axis of screw 21); a two-dimensional photosensor array (see Figure 3) attached to the second portion; a light path extending between a plane and the two-dimensional photosensor array; and a lens (at 30; see Figure 2) positioned in the light path. Martin also discloses (see Figure 1) the second portion is movably mounted to a second axis (axis of screw 22) wherein the first axis is substantially perpendicular to the second axis. Further, since the position sensing device moves or scans, it is associated with a scanning device. Martin further discloses (see Figure 1) the first portion is a control portion (screw turning handle) of an actuator mechanism and wherein the second portion is an actuating portion (the moving portion) of the actuator mechanism. Also, since the lens is mounted to the second portion, the lens is operationally associated with the second portion. In addition, Martin discloses (see Figure 3) the two-dimensional photosensor array comprises a two-dimensional array of photodetector elements (38; at each aperture 34, 36).

Regarding claim 23, Martin discloses (see Figures 1-3) a position sensing device for determining the position of an object (10) relative to a surface (26), the device comprising: a substrate (18) associated with the object; a photodetector means (see Figure 3) associated with the substrate for converting an image of a two-dimensional portion of a surface to machine-readable data; a light path extending between a planar

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portion of the surface and the photodetector means; and a means for moving (20, 21, 22) the photodetector means relative to the substrate to maintain the light path between the planar portion of the surface and the photodetector means as the object is moved relative to the surface.

6. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura et al. (U.S. Patent 5,040,124).

Regarding claims 1-4, 6 and 7, Okumura et al. disclose (see Figure 2) a position sensing device, comprising: a substrate (base; not labeled); a first portion (housing below 21) and a second portion (at 3) wherein the first portion is attached to the substrate and wherein the second portion is movably mounted to the first portion along a first axis; a two-dimensional photosensor array (see column 18, lines 10-15) attached to the second portion; a light path extending between a plane and the two-dimensional photosensor array; and a lens (inherent in a camera) positioned in the light path.

Okumura et al. also disclose (see Figure 2) the second portion is movably mounted to a second axis wherein the first axis is substantially perpendicular to the second axis and along a third axis normal to the first and second axes (x, y, z directions). Further, since the position sensing device moves or scans, it is associated with a scanning device.

Also, since the lens is mounted to the second portion, the lens is operationally associated with the second portion. In addition, Okumura et al. disclose (see column 18, lines 10-15) the two-dimensional photosensor array comprises a two-dimensional array of photodetector elements.

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Martin or Okumura et al.

Regarding claims 8 and 9, Martin or Okumura et al. disclose the claimed invention as set forth above. Martin and Okumura et al. do not specifically disclose the array having between ten and twenty rows or columns of photodetector elements. However, arrays of varying sizes are well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made and require only routine skill in the art to choose an optimal array size in the apparatus of Martin or Okumura et al. for a desired resolution to either reduce costs or further improve detection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta, can be reached on (703) 308-4852. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl
June 10, 2003



Thanh X. Luu
Patent Examiner